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Identifying Learning Opportunities in Online Collaboration: A variation theory approach

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Abstract: The focus of this paper is on the issue of evaluating learning which occurs in the process of online collaboration. The goal of this paper is to demonstrate the utility of a theoretical framework (variation theory) to assess the process of online collaboration. To this end, discourse of six online groups collaborating using wiki was examined. Variation theory made possible the observation that, although the groups differed markedly in their collaboration process, they focused on the same aspects of the object of learning, while ignoring one key aspect. Further analysis suggested that this missed learning opportunity may have led the students to develop a ‘misconception’ of the topic. These findings point to the value of variation theory as a framework for analysing online discourse to make claims related to students’ learning.

Keywords: Variation theory, learning opportunity, online collaboration, wiki.

Introduction

The focus of this paper is on the issue of evaluating learning which occurs in the process of online collaboration. The central problem here concerns how teachers and researchers can assess or evaluate what students, having participated in an episode of online collaboration, have learned from their collaboration. Put differently, this is an issue of identifying learning opportunities afforded by a particular episode of online collaboration.

It is important for educators to assess, in one way or another, their students’ collaboration processes, because it does not always proceed in an ideal manner. In group work, responsibility is distributed, and thus group members may be tempted to give less-than-optimal effort or “free ride” [19]. Issues related to social and academic status may prevent lower-status members from actively participating in the collaboration [10]. Even groups composed of high-achieving students may fail to solve problems, especially when their interaction is incoherent as judged from how solution proposals were proposed and responded to [1].

The process of collaboration can of course be examined from many perspectives. The goal of this paper is to demonstrate the utility of a relatively new theoretical framework (variation theory [13]) to assess the process of online collaboration. In particular, the study illustrates how variation theory can highlight features of the collaboration process to identify what individual students’ may have learned from their collaboration process.

1. Previous studies

How is *learning* conceptualised and assessed based on online group discourse data in previous studies of online collaboration? A survey of the literature revealed two distinct ways approaches: one which leans on a broadly cognitive perspective, and another which is based on sociocultural theories of learning.